GENITAL TRACT INFECTIONS
Epididymitis +/- Orchitis

Pain and swelling of the epididymis +/- testis (orchitis), pyrexia, with or without urethral discharge.

Organisms:
- Sexually transmitted pathogens, e.g., C. trachomatis, N. gonorrhoeae
- Enteric organisms associated with lower urinary tract infection (UTI), e.g., E. coli.
- In non-immunised, mumps virus

Practise points:
- ***EXCLUDE TESTICULAR TORSION in ALL cases of pain and/or swelling of the epididymis or testis.***
- Consider mumps orchitis if there is a history of headache, fever or parotid swelling 7-10 days prior to testicular swelling. Scrotal involvement can occur in the absence of any systemic symptoms of mumps.
  - Send an inside cheek/throat viral swab for mumps PCR testing.
  - **Mumps is a notifiable disease**

- A detailed sexual history is required in all cases:
  a) Epididymo-orchitis most probably due to any sexually transmitted infection (STI):
  younger patient, high-risk sexual history (new sexual partner or multiple recent sexual partners, lack of consistent condom use), contact of an STI, no previous urological procedure or UTI, urethral discharge present, urine dipstick positive for leucocytes only.

  b) Epididymitis most likely caused by STI, and enteric organisms associated with lower UTI:
  STI risk factors in men who practise insertive anal sex.

  c) Epididymo-orchitis most probably due to enteric organisms associated with lower UTI:
  e.g., an older patient, not sexually active, recent procedure and instrumentation (such as prostatic biopsy, vasectomy or catheterisation), and men who practise insertive anal intercourse, men with known abnormalities of the urinary tract, no urethral discharge, or positive urine dipstick for leucocytes and nitrites.
  - However, there is overlap between these groups, dependent on sexual history.

- Advise patient to abstain from sexual contact until they and any partner(s) have completed treatment. (Note: partner treatment may not be required in non-STI causes)
- Follow-up if there is a confirmed or suspected STI after 2 weeks. Check sexual abstinence and ensure partner notification is complete.
- Symptoms should be improving after 3 days.
- If microbiology results are positive for STI – refer to ISHS for follow-up and partner notification
- Check MSU and laboratory results and adjust antibiotics where necessary

Investigations:
- **IN-HOURS (DAYTIME)**: **Do NOT** initiate antibiotic treatment and contact the Integrated Sexual Health Service (ISHS) for a same-day appointment if STI is likely.

- **OUT of HOURS**: **FIRST,** take the following specimens and **then** treat empirically until the results are available. If STI is suspected, contact all sexual partners for treatment and follow-up by ISHS.

1. First-pass urine (FPU) flow for *C. trachomatis, N. gonorrhoeae, and M. genitalium* nucleic acid amplification tests (NAAT)
2. Urine dipstick test and mid-stream urine (MSU) sample for "cell count, culture & sensitivity (MC&S)."
3. If there is visible urethral discharge, take a urethral swab for *N. gonorrhoeae* MC&S. Do not place charcoal swabs within the urethra.

Central Booking Line numbers for Nottingham / Nottinghamshire Sexual Health Service

Mid-Notts:	**My Sexual Health**	01623 672 260
North Notts:	**Tri Health**	01909 571 571 / 01777 200 177
South Notts / Nottingham:	**Nottingham Sexual Health**	0115 962 7627

Empirical Treatment for Out of Hours

Medicine	Dose	Treatment duration
If likely due to STI:		
First line:		
Ceftriaxone[1,2]	1 g IM	Single dose
Plus		
Doxycycline	100mg orally twice daily	14 days
Second line: *(if a cephalosporin and/or tetracycline antibiotic is contraindicated.)*		
Levofloxacin ^	500mg orally once daily	10 days
If likely due to STI and enteric organisms associated with lower UTI: (STI risk factors in men who practise insertive anal sex)		
Ceftriaxone[1,2]	1 g IM	Single dose
Plus		
Levofloxacin ^	500mg orally once daily	10 days
If likely due to enteric organisms associated with lower UTI:		
First line:		
Levofloxacin ^	500mg orally once daily	10 days
Second line: *(if quinolones are contraindicated.)*		
Co-amoxiclav[2,3]	625mg orally three times daily	10 days

[1] Add 1 ml lidocaine 1% to each 250mg vial and give by deep IM injection only.

[2] Discuss with micro or ISHS if the patient has a severe penicillin allergy (anaphylaxis, angioedema or urticarial rash within the first 72 hours or allergy to cephalosporins.

[3] Review the urine culture results to determine if co-amoxiclav is still the appropriate antibiotic choice due to the increased local resistance rate of E. coli isolates in the community.

^ **Note**: Fluoroquinolones should only be used when other antibiotics are inappropriate. If a penicillin allergy is recorded, the exact nature of the reaction should be clarified including whether other beta lactams (e.g., cephalosporins) have been previously tolerated. Fluoroquinolones can cause long-lasting (up to months or years), disabling, and potentially irreversible side effects, sometimes affecting multiple systems, organ classes, and senses. Please refer here for further information on MHRA alerts.

Patient information leaflet:

- The MHRA patient leaflet on fluoroquinolones ((regular print or large print)
- The British Association for Sexual Health and HIV (BASHH) patient leaflet: Epididymo-orchitis.
- Patient.info patient leaflet: Epididymo-orchitis

Pre-pubertal child with Suspected Epididymo-orchitis

- Arrange emergency hospital admission if symptoms are severe (child is systemically unwell, or there is a suspected serious complication).
- Consider the diagnosis of mumps orchitis. See Mumps.
- Arrange a urine dipstick test and MSU sample for microscopy and culture. See UTI in children for management. Arrange onward referral to a paediatrician as appropriate.
- If UTI is not confirmed, do not start antibiotic treatment routinely
    - Reassure parents/carers that epididymitis is usually a self-limiting condition which resolves with rest and analgesia.
    - If there is any uncertainty about management, seek specialist advice or consider arranging a referral to paediatric urology—the urgency depends on clinical judgement.